



Chapter

6

Municipal Solid Waste

Municipal Solid Waste - Current Fairfax County Management System, Anticipated Gaps in Waste Management, and SWMP Actions

This chapter presents the process used by the county to evaluate the current SWM system, project the future waste stream, identify anticipated gaps in waste management, and select SWMP actions for MSW.

This chapter presents the evaluation of Fairfax County's current and projected solid waste management (SWM) activities for municipal solid waste (MSW), organized by the SWM hierarchy. It uses the hierarchy as the framework for determining how to bridge the gaps between the current SWM activities and the strategies needed to manage the county's MSW in the future. The chapter then presents Fairfax County's Solid Waste Management Plan (SWMP) actions for MSW over the next 20 years to address those gaps.

Using the SWM hierarchy, Fairfax County staff first evaluated current SWM practices, including source reduction and reuse initiatives, recycling activities and programs, future markets for recyclables, collection operations, transfer facilities, and characteristics of solid waste disposal facilities. Next, the county reviewed the current and future projections of its solid waste stream quantities over the SWMP planning period. Using these projections, the county assessed the changes in the solid waste stream over the planning period and identified the critical areas requiring modification. Finally, the county selected SWMP actions that will close the gaps between its current SWM system and that required in the future.

Overview of the 20-Year Plan for Fairfax County's MSW Management System

Fairfax County's current SWM programs and activities for MSW, the gaps in waste management, and SWMP actions over the SWMP planning period are summarized in Table 6-1. This table is organized by level of the waste hierarchy, from source reduction and reuse, to recycling, collection, transfer, and disposal. (Note that private companies are responsible for many of the activities in the current and future system.)

Table 6-1. MSW: Current Waste Management Activities, Anticipated Gaps in Waste Management, and SWMP Actions

	Current Programs in the County	Anticipated Gaps	SWMP Actions
Source reduction and reuse	<ul style="list-style-type: none"> Public outreach and education Network of charitable organizations and thrift shops Internal county source reduction and reuse initiatives 	<ul style="list-style-type: none"> Additional 206,000 to 692,000 tons per year of MSW generated in the county by 2025 	<ul style="list-style-type: none"> Improve public outreach and education to promote source reduction and reuse Promote public/private source reduction and reuse programs Implement county internal source reduction and reuse programs
Recycling	<ul style="list-style-type: none"> Public outreach and education County recycling program policy administration through County Code, Chapter 109 Recycling collection, including eight recycling drop-off centers Three private MRFs: Capital Fiber, Fairfax Recycling, Waste Management Electronics recycling program 	<ul style="list-style-type: none"> Additional 81,000 to 195,000 tons per year of MSW recyclables by 2025 Require additional recycling collection vehicles and labor MRF capacity may need to expand to handle increased paper and commingled recyclables quantities 	<ul style="list-style-type: none"> Promote public/private recycling programs Improve public outreach and education to promote recycling Increase business recycling by reducing commercial recycling thresholds Expand curbside recyclables collected to include mixed paper, plastic bottles, and cardboard Revise regulations to enhance recycling, including: <ul style="list-style-type: none"> Expand recyclables collected at government buildings Encourage increased MSW recycling in county schools Increase MSW recycling inspections Address suitable recycling alternatives for existing multiunit buildings Explore additional waste exchange agreements to increase recycling Support expansion of the capacity of existing MRFs, if quantities of recyclable materials warrant expansion
Collection	<ul style="list-style-type: none"> Residential curbside and multiunit complex collection Two MSW citizens' disposal drop-off centers Commercial collection County agency collection 	<ul style="list-style-type: none"> Additional 163,000 to 559,000 tons per year of MSW collection by 2025 Require additional MSW collection vehicles and labor Service levels and costs vary throughout the county No single entity can take a holistic approach to managing all waste for the public benefit, especially during emergencies or weather events Collection methods are inefficient and allow multiple trucks in neighborhoods daily 	<ul style="list-style-type: none"> County oversees residential collection services through contracts with private companies Revise County Code to reflect residential service level changes and requirements Promote use of special fuels, filters, and special vehicles for collection Implement a collection and disposal strategy for emergencies
Transfer	<ul style="list-style-type: none"> I-66 Transfer Station Three MRFs for MSW recyclables 	<ul style="list-style-type: none"> Additional 66,000 to 403,000 tons per year of MSW handled at the I-66 Transfer Station by 2025 May exceed transfer station capacity between 2020 and 2025 Additional sorting and recycling of materials could divert more from disposal 	<ul style="list-style-type: none"> Continue using the current transfer system Reconfigure or construct waste handling areas at the I-66 Transfer Station, including unloading areas for citizens and commercial cash customers (for increased safety and efficiency) Add transfer capabilities to the I-95 Landfill Complex, if increases in transfer quantities or waste exchange agreements require it
Disposal	<ul style="list-style-type: none"> E/RRF as primary disposal method Out-of-county sanitary landfills for E/RRF "overflow" waste 	<ul style="list-style-type: none"> Annual disposal tonnage increases from current 816,000 tons to between 914,000 and 1,241,000 tons by 2025 May exceed E/RRF capacity around 2015 Contract with E/RRF ends in 2011 	<ul style="list-style-type: none"> Continue using the current disposal system (as the preferred alternative) If negotiations with Covanta Fairfax, Inc. are unsuccessful, the county will use only out-of-county landfills for MSW disposal

Source Reduction and Reuse

Current Programs

Fairfax County's current source reduction and reuse initiatives for MSW include:

- identifying a network of local charitable organizations and thrift stores, and
- promoting internal government initiatives.

There are presently 41 consignment store locations and 23 thrift shop locations within Fairfax County.

Charitable Organizations and Thrift Stores

Fairfax County promotes a large network of charitable organizations and thrift stores for the reuse and resale of clothing and household items. These charitable organizations and thrift stores provide an opportunity for citizens to donate usable items for reuse rather than disposing of them. The county supports these organizations by providing lists of county thrift shops and consignment stores on the county website and at the I-95 Landfill Complex and I-66 Transfer Station recycling drop off centers (DOCs).

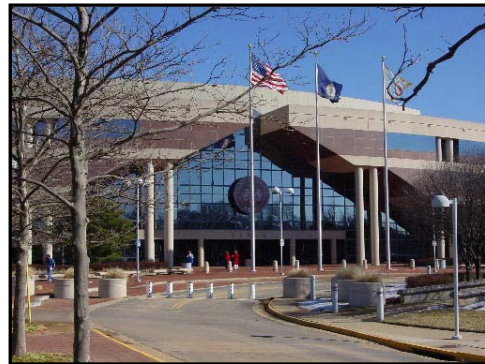


There are presently 41 consignment store locations and 23 thrift shop locations within the county. Thrift shops are run by Not-For-Profit organizations (e.g., Salvation Army, Goodwill) and accept donated merchandise that is sold to fund their charitable causes. Consignment shops accept merchandise on a consignment basis, paying the owners of the merchandise a percentage when and if the items are sold.

Internal County Practices

The county supports and pursues source reduction and reuse initiatives, including the following:

- The county is using electronic initiatives to reduce the paperwork and transportation affects associated with citizens and businesses paying bills, receiving information, applying for services, etc. The county also reduces paper generation by receiving invoices and billing some vendors electronically.



Fairfax County has implemented many internal initiatives to promote source reduction and reuse.

- County agencies and public schools review whether printed documents can be distributed and completed online.
- The Department of Purchasing and Supply Management (DPSM) incorporates source reduction and recycling requirements in all bid specifications. For example, DPSM mails one-page notice-of-solicitation letters rather than the entire solicitation package and provides for electronic posting of solicitations. All bids are available on-line.
- The Department of Information Technology encourages leasing copiers and printers that provide two-sided documents.
- County agencies are encouraged to check for the availability of existing supplies before purchasing new ones.
- The county uses two-sided copying when possible.
- The county established the Employee Recycling Committee (ERC) to facilitate the development of comprehensive waste reduction and recycling policies in all county agencies and to promote the purchase of products made from recycled materials.
- The county supports the Fairfax County Business Advisory Committee for Solid Waste and Recycling Issues to facilitate partnerships between the county and businesses to support source reduction programs.

Fairfax County's website provides its citizens and businesses information on source reduction and reuse.

Public Outreach and Education - Source Reduction and Reuse



Fairfax County provides its citizens and businesses

information on source reduction and reuse at its website, including suggestions for being a "smart shopper" and ways to reuse products and packaging at home and at work. The site includes a lengthy list of thrift stores and consignment shops that accept clothing and furniture donations. The site also contains a link to EPA's *Consumer's Handbook for Reducing Solid Waste*.

Assessment of Current and Future Source Reduction and Reuse Needs

Calculating the quantities of solid waste that are reduced prior to entering the waste stream is problematic. Therefore, the county does not develop source reduction and reuse projections for solid waste.

Fairfax County attempts to follow the waste management hierarchy in designing its SWM system. The county prefers source reduction followed by reuse and recycling to disposal of solid waste. The SWM Program goal is to implement new programs that will maximize the volume of solid waste handled by source reduction and reuse over the SWMP planning period.

SWMP Actions

Table 6-2 shows Fairfax County's SWMP actions for the source reduction and reuse of MSW. The county selected SWMP actions based on their alignment with the SWMP objectives (in Chapter 4) and their ability to close the gaps between the county's current SWM system and that required in the future. These SWMP actions are discussed in more detail in Chapter 11.

Table 6-2. Fairfax County MSW Source Reduction and Reuse SWMP Actions

MSW Source Reduction and Reuse SWMP Actions
Improve public outreach and education to promote source reduction and reuse
Promote public/private source reduction and reuse programs
Implement internal county source reduction and reuse programs

Recycling

Current Programs

MSW recycling rates in Fairfax County have consistently exceeded the state mandated 25 percent.



Fairfax County has well established, publicized, and available recycling initiatives. Recycling levels in the county have consistently exceeded the state mandated recycling rate of 25 percent. The county's most recent (2002) recycling rate was 32 percent, the majority of which is paper and yard debris. Approximately 386,000 tons of

recyclables were collected within the county in 2002. Table 6-3 shows recycling data for Fairfax County from 1999 to 2002. (Note that MSW recycling includes yard waste, which is discussed in Chapter 8).

Table 6-3. Fairfax County Recycling Rates (1999–2002), tons

Material	1999	2000	2001	2002
Paper	146,072	173,868	174,295	157,963
Metal	60,576	89,616	75,877	75,477
Plastic	3,358	3,521	2,508	2,581
Glass	14,516	17,228	9,183	10,453
Commingled bottles and cans	—	4,136	10,246	13,662
Yard waste	96,211	102,480	112,745	106,768
Wood	—	1,260	392	982
Textiles	1,717	444	2,711	2,353
Waste tires	4,799	4,229	3,950	7,649
Used oil	8,019	7,208	7,316	6,138
Used oil filters	—	—	128	182
Used antifreeze	—	—	920	705
Batteries	482	582	981	956
Electronics	—	—	54	132
Chemicals and solvents	788	967	61	47
Total material recycled	336,921	405,539	401,367	386,019
Waste generated	715,645	733,340	772,817	820,096
Total waste stream	1,052,566	1,138,879	1,174,184	1,206,115
County recycling rate	32.0%	35.6%	34.2%	32.0%

The following MSW materials may be recycled in Fairfax County:

Aluminum cans, food cans	Catalogs, magazines, junk mail	Newspaper, office paper, mixed paper
Appliances	Computers	Plastic bottles and jugs
Batteries	Glass bottles and jugs	Scrap metal
Cardboard	Motor oil	Telephone books

In Fairfax County, recycling of these materials is facilitated through the county recycling program, which consists of three primary components: (1) recycling collection, (2) material recovery facilities (MRFs), and (3) county recycling policy administration. The county's current recycling programs also include electronics and computers recycling. These components are detailed below.

Recycling Collection

In Fairfax County, recyclables are collected at many different locations, including: curbside at residences, centralized containers at multiunit complexes, recycling drop-off centers (DOCs), containers at businesses, county agencies, special recycling collection events, and from the Energy/Resource Recovery Facility (E/RRF):